From: Misuraca, Tia (ECY)
To: Smith, Andrew (ECY); Donovan, Carl
Cc: Kunze, Sydney
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023
Date: Wednesday, August 9, 2023 2:03:11 PM
Attachments: image001.png

Hi Carl,

Ecology has evaluated the two scenarios you proposed in your email dated August 31, 2022 and feel that Scenario 2 is the more appropriate given the seasonal fluctuation in contaminant concentrations over the past monitoring events. Ecology grants approval of a reduced groundwater monitoring schedule to every 2.5 years. With this revised schedule, your next monitoring event will be July/August of 2025.

We've done some research regarding your question about issuing an NFA for your site utilizing silica gel cleanup of groundwater samples impacted with petroleum hydrocarbons as diesel. According to TCP's policies, we are currently not allowing silica gel cleanup for groundwater impacted with diesel. TCP is in the process of developing a 'Draft Guidance for Silica Gel Cleanup in Washington State' , which will allow the use of silica gel cleanup for diesel impacted groundwater under certain conditions. Using the equation in the guidance document and your most recent diesel range organics (DRO) concentrations with and without silica gel cleanup, the polar organic concentrations are still above cleanup level of 500 ug/L.

Here is the link to the draft guidance document for your reference (Guidance SGC). Let me know if you have any other questions.

Tia Misuraca
She/Her
Site Manager
Department of Ecology
Toxics Cleanup Program
360-742-2807

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Thursday, August 3, 2023 10:43 AM
To: Donovan, Carl <Carl.Donovan@arcadis.com>
Cc: Kunze, Sydney <Sydney.Kunze@arcadis.com>; Misuraca, Tia (ECY) <tmis461@ECY.WA.GOV>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Carl,
We are working on evaluating the best approach for this site. I have a new site manager (Tia Misuraca) that I have assigned this question to and between us we will make a decision on the best approach. Give us some time to work through the silica gel question and the best approach for the soil issues. We will get back to you.

Thanks
Andy

Andrew Smith, PE, LHG
Unit Supervisor UST/Technical Support Unit
Department of Ecology
Toxics Cleanup Program
360-485-3987

From: Donovan, Carl <Carl.Donovan@arcadis.com>
Sent: Wednesday, August 2, 2023 12:13 PM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Kunze, Sydney <Sydney.Kunze@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Hi Andy,

Any updates?

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Donovan, Carl
Sent: Thursday, July 6, 2023 8:30 AM
To: 'Smith, Andrew (ECY)' <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Hi Andy,

Just wanted to follow up on a path forward for the site. You were going to follow up on the use of SGC given the concentrations, age of release, and biogenic material encountered to confirm the use of silica gel. Once we get confirmation on the use of SGC, we have a few options to support an NFA:

1. Use of empirical demonstration coupled with Model Remedy 4 for Sites with Petroleum Impacts to Soil to support an NFA without an EC. I would also offer that a model remedy using a multiple line of evidence approach could support that additional soil assessment if not needed and we could rely on existing data.
2. A limited soil assessment to demonstrate that soil is now less than applicable CULs. During that assessment, VPH/EPH data will/may be collected to determine a site-specific TPH CUL to support an NFA without an EC.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Donovan, Carl
Sent: Wednesday, June 7, 2023 9:19 AM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Hi Andy,

Just wanted to follow up on this site to see where we landed on our path to closure now that you are back from PTO.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com

Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Donovan, Carl
Sent: Thursday, May 25, 2023 1:59 PM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Hi Andy,

Hope you enjoyed your PTO, now that you are back in the office, I wanted to circle back with you on the various closure scenarios we discussed as presented below.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Donovan, Carl
Sent: Wednesday, April 12, 2023 3:53 PM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Hi Andy,

See attached presentation for your reference. As discussed, we feel that the site is ready for closure. The main issue that we need concurrence on is the use of silica gel cleanup at the site, if Ecology agrees that it is justified, this will mean that groundwater is Method A compliant. From there, we will need to address residual TPH detections in soil that were collected within the water table. There are a few options:

1. Use of empirical demonstration coupled with Model Remedy 4 for Sites with Petroleum Impacts to Soil to support an NFA without an EC.
2. A limited soil assessment to demonstrate that soil is now less than applicable CULs. During that assessment, VPH/EPH data will be collected to determine a site-specific TPH CUL to support an NFA without an EC.

Both options for a clean closure hinge on Ecology accepting the use of silica gel cleanup at the site. If we do not here back from you this week, we will follow up in May when you are back from PTO.

Let us know if you have any questions.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Friday, April 7, 2023 8:18 AM
To: Donovan, Carl <Carl.Donovan@arcadis.com>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Wed after 2pm works.

From: Donovan, Carl <Carl.Donovan@arcadis.com>
Sent: Friday, April 7, 2023 7:32 AM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>

Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Andy,

Does next week at 2pm on either Tuesday, Wednesday, or Thursday work for you? If not let me know if there is a preferred day or time and I can likely shuffle some things around to accommodate.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Thursday, April 6, 2023 2:16 PM
To: Donovan, Carl <Carl.Donovan@arcadis.com>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

We can set up a call. I am on vacation from 4/17 through 5/2

From: Donovan, Carl <Carl.Donovan@arcadis.com>
Sent: Thursday, April 6, 2023 2:02 PM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Andy,

No problem, on including this in future reports. We would like to regroup on a path forward for the site to support an NFA. If it would be easier to discuss, please let me know and I will set up a call.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

ARCADIS Design & Consultancy for natural and built assets

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Thursday, March 30, 2023 9:13 AM
To: Donovan, Carl <Carl.Donovan@arcadis.com>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Carl,
Going forward, can you include the FSID on your reports.
Thanks
Andy

From: Donovan, Carl <Carl.Donovan@arcadis.com>
Sent: Thursday, March 30, 2023 8:33 AM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Sure no problem, the FSID is 7937547.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

Arcadis. Improving quality of life

Be green, leave it on the screen.

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Thursday, March 30, 2023 8:32 AM
To: Donovan, Carl <Carl.Donovan@arcadis.com>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: RE: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Carl,
Do you have the Facility Site ID for this site? I am having a hard time finding this site.
Thanks
Andy

From: Donovan, Carl <Carl.Donovan@arcadis.com>
Sent: Wednesday, March 29, 2023 7:47 PM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Clark, Sydney <Sydney.Clark@arcadis.com>
Subject: Former Union Oil Bulk Plant 302095 - FSID 7937547 - Semi-Annual Status Report, First Half 2023

Andy,

Please find the attached Semi-Annual Site Status Report for the above referenced site. I would like to regroup with you on a path to closure now that the public comment period is over. If you recall, we discussed a few different closure scenarios last year to support an NFA determination.

I think it would be worthwhile regrouping on this site so that we can align on the next steps. The call does not need to be immediate, but if we could get this on the books in the coming weeks, that would be great.

Thanks,
Carl

Carl Donovan | Project Geologist | carl.donovan@arcadis-us.com
Arcadis | Arcadis U.S., Inc.
830 NE Holladay Street Suite 109, Portland, OR | 97232 | USA
T: 503.785.9470 | C: 916.915.7309

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

Arcadis. Improving quality of life

Be green, leave it on the screen.

This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.

This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.

This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.

This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.

This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.